

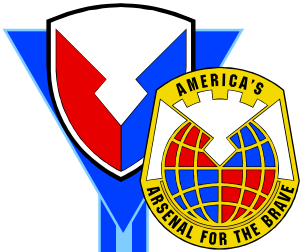
PURPOSE OF MEETING

Primary focus of this meeting is to discuss the Automated Document Conversion Service (ADCS) Program and the FCG's role in that effort.

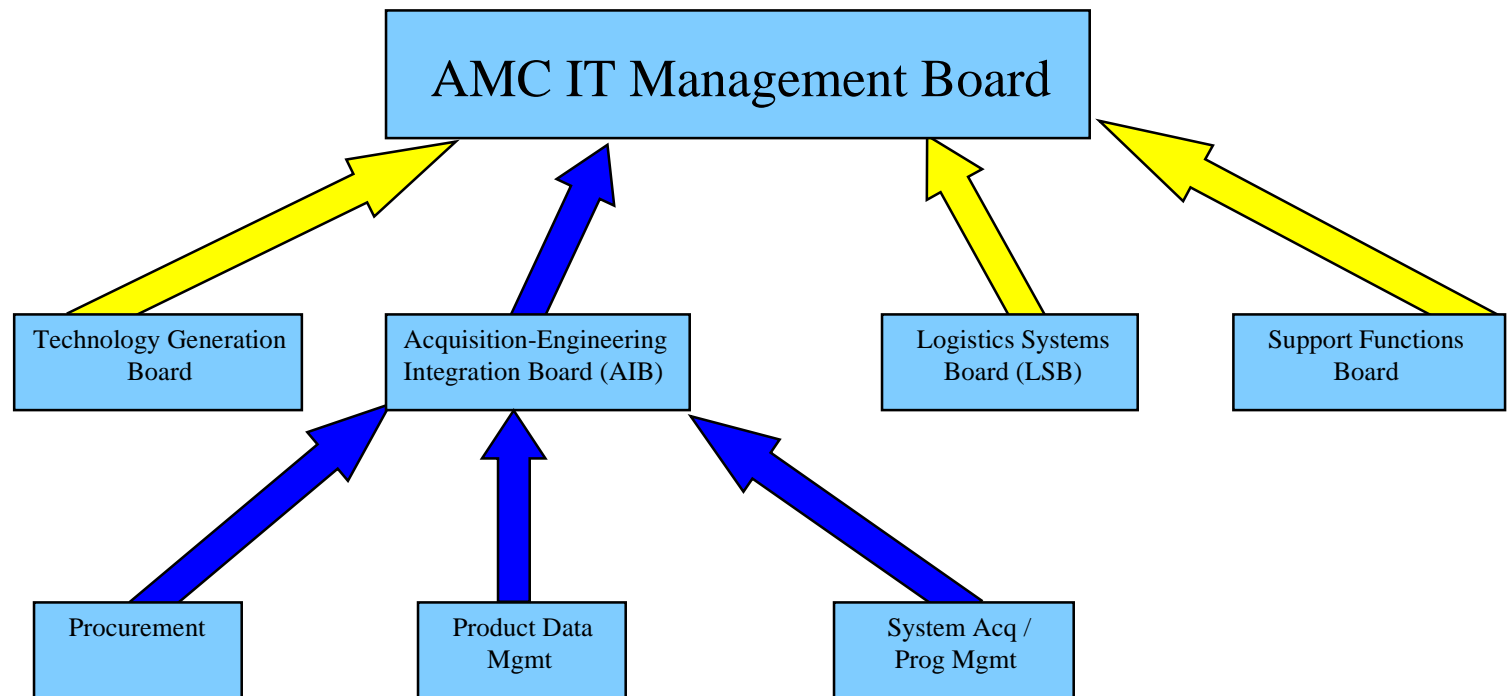
The Acquisition-Engineering Information Board has asked the FCG to recommend what the Army's FY2000 ADCS Program should be.

AGENDA

- | | | |
|--------------------|---|----------------|
| 1300-1305 | Introductions and opening remarks | Ney |
| 1305-1315 | Acquisition engineering Information Board (AIB) | Knowles |
| 1315-1330 | PDM Functional Coordinating Group (FCG) Charter | Ney |
| 1330-1450 | Review of Automated Document Conversion Service (ADCS) | |
| 1330-1400 | Overall Army ADCS Program | Behrens |
| 1400-1430 | Data Call and Prioritization of FY 2000 ADCS Projects | Simmons |
| 1430-1450 | Guide Specification | Everitt |
| ➤ 1450-1500 | Discussion and Actions | Ney |

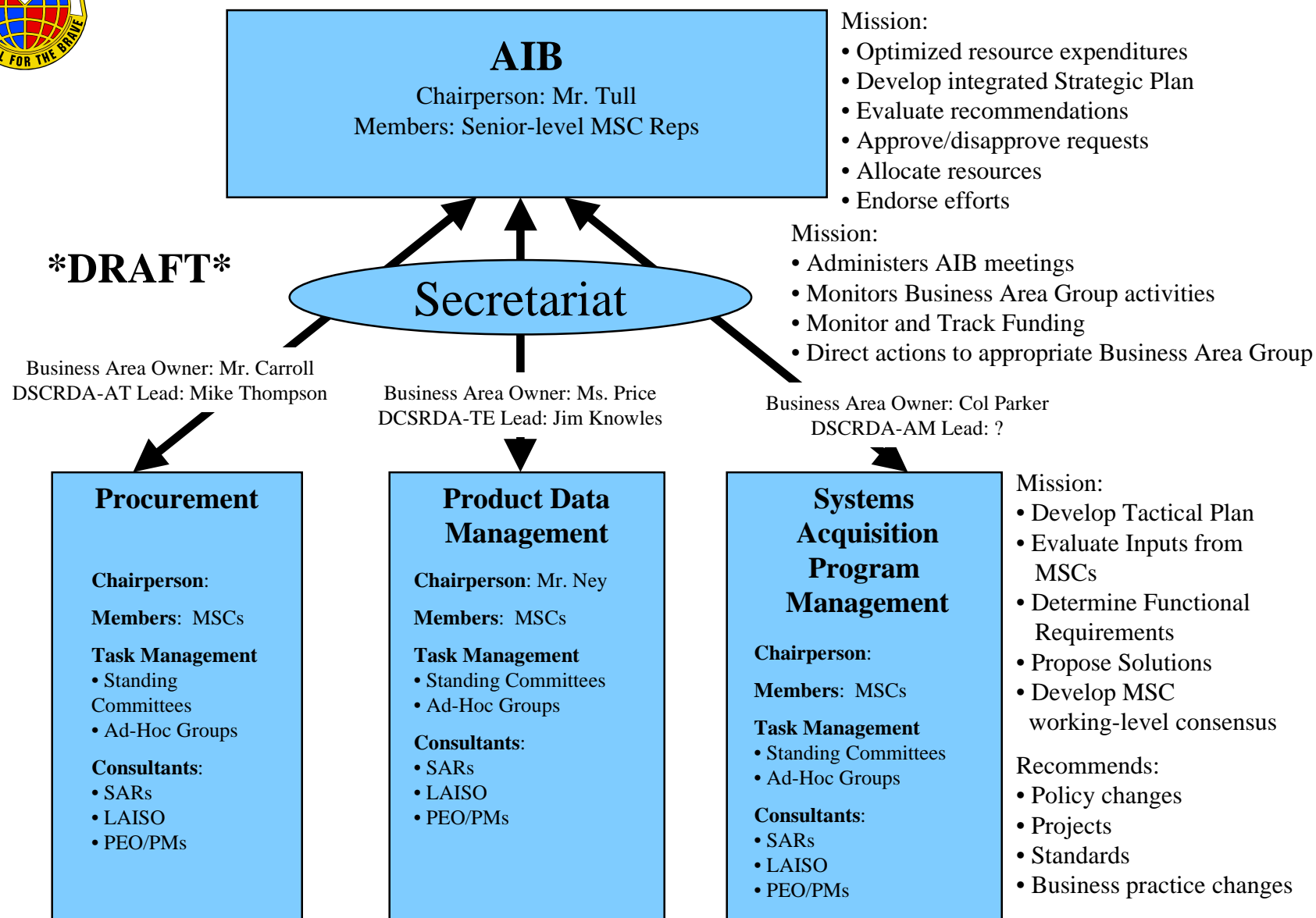


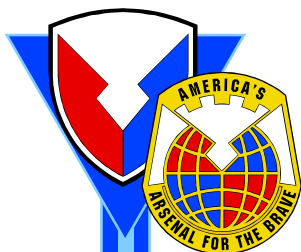
AMC INFORMATION TECHNOLOGY (IT) BOARDS



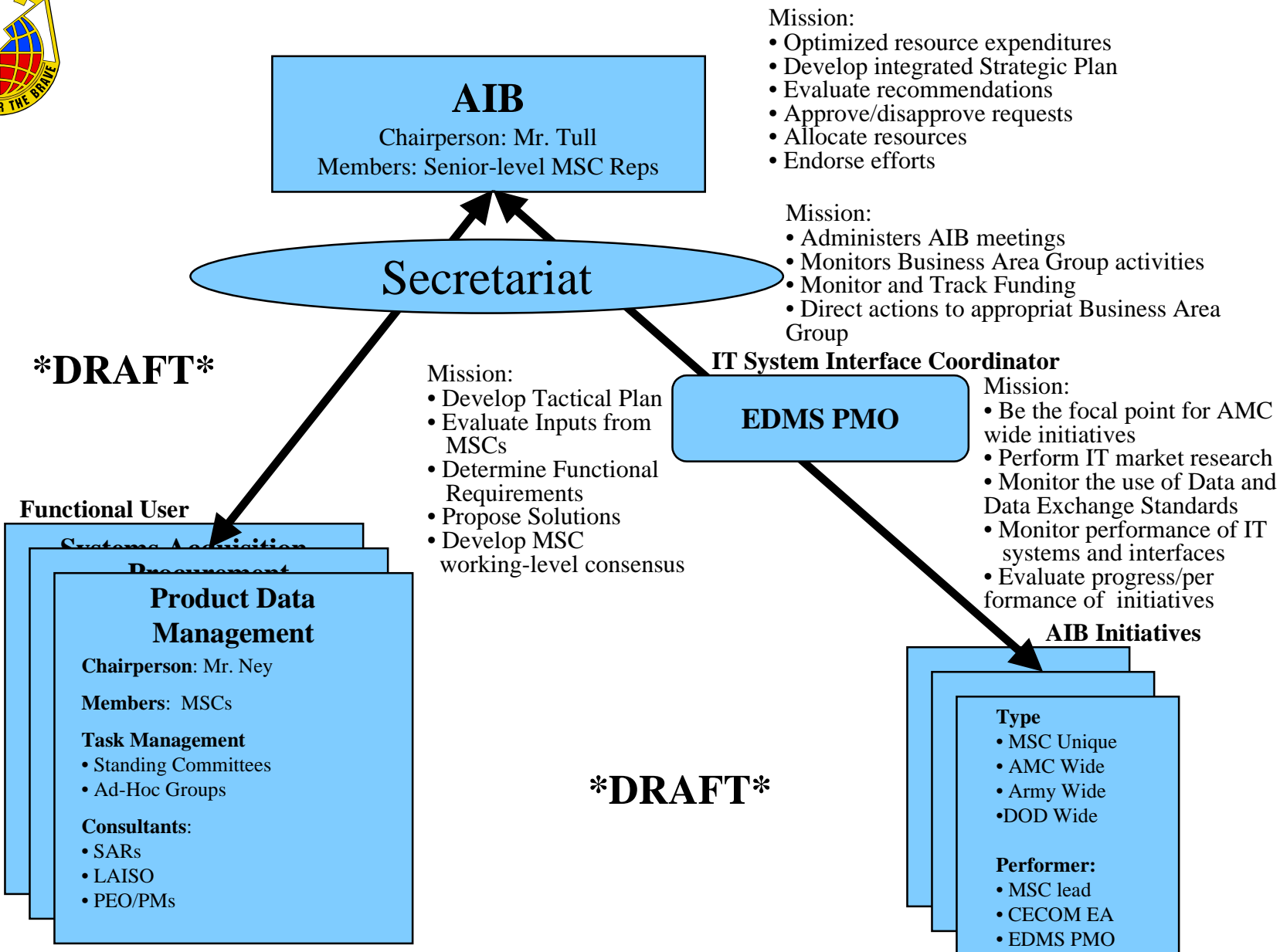


ACQUISITION-ENGINEERING INFORMATION BOARD (AIB)





AIB





AIB SCOPE AND IT AREAS

⑩ SCOPE AND APPLICABILITY OF PROJECTS/INITIATIVES

☞ ACTIVITY UNIQUE

⑩ SITE FUNDED

⑩ IF DIRECTED BY AIB, FUNDED BY AIB

☞ MSC/SRA UNIQUE

⑩ IF MOVED TO AMC WIDE BY AIB, AIB FUNDS

☞ AMC OR HIGHER

⑩ TYPES OF IT EFFORTS

☞ LEGACY (SUSTAINING ONLY)

⑩ BASELINE (WHAT/WHY ARE WE DOING)

⑩ LIFE CYCLE (FOR HOW MUCH LONGER)

☞ CURRENT (SUSTAINING AND UPGRADING)

⑩ BASELINES (STATUS QUO)

⑩ LIFE CYCLE (FUTURE)

⑩ UP-GRADES (REQUIREMENTS)

☞ NEW (NEAR TERM)

⑩ REPLACES(BASELINE)

⑩ REQUIREMENTS

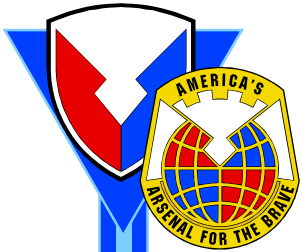
⑩ LIFE CYCLE

☞ EMERGING SOLUTIONS (LONG TERM)

⑩ TECHNOLOGY AVAILABILITY

☞ PROCESS/ORGANIZATIONAL CHANGES

DRAFT



AIB PURPOSE

DRAFT

- ★ IDENTIFY ALL ON-GOING EFFORTS.
- ★ STOP EACH MSC FROM MOVING TO INDEPENDENT SOLUTIONS.
- ★ ELIMINATE DUPLICATION
- ★ PROVIDE A GUIDING HAND TO ENSURE SOME DEGREE OF STANDARDIZATION AND INTEROPERABILITY WITHIN AMC AND/OR THE SERVICES.
- ★ PROVIDE A COMMAND WIDE ACQUISITION-ENGINEERING STRATEGY AND
- ★ VISION FOR INFORMATION TECHNOLOGY EFFORTS.
- ★ UNDER THE GUIDELINES FOR THE INFORMATION BOARD, NOT ONLY INFLUENCE BUT MANAGE.
- ★ TO AGREE TO AN AMC SOLUTION RATHER THAN A SERIES OF LOCAL SOLUTIONS.
- ★ IF FUNDING FOR A CENTRALIZED EFFORT IS NOT AVAILABLE, AT LEAST INFLUENCE THE INVESTMENTS OF THE MSCS TO GET WHERE WE NEED TO BE.
- ★ CONSENSUS AMC SOLUTIONS PREFERRED, BUT IF NECESSARY. A DIRECTED AMC SOLUTION.

DRAFT

Product Data Management (PDM) Functional Coordinating Group (FCG)

Chartered by: AMC Commanding General to support the AMC Acquisition-Engineering Information Board (AIB) and Deputy Chief of Staff for Research, Development and Acquisition (DSCRDA)

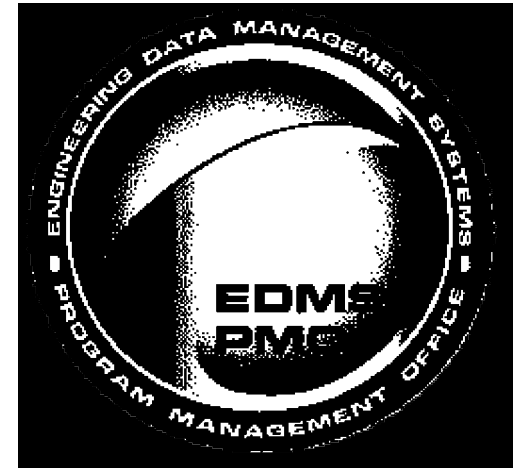
Supervised by: DCSRDA, who is the Army Engineering and Technical Data Business Process Manager

PDM FCG Mission

The mission is to act as the functional proponent for the support of engineering and technical data management processes and automation systems and to provide advice and support to the AIB, DCSRDA and the Army Engineering and Technical Data Business Process Manager (AMCRDA-TE). As such, the FCG will assure that all information system life-cycle-management, functional, process requirements are identified in order to successfully develop, field and maintain EDM processes and systems.

PDM FCG Tasks

- Recommend Army ADCS Prioritized Project Package to AIB
 - Provide MSC input to TACOM Pilot and AMC ACMS effort
 - Provide Architecture for IT in Product Data Management
 - MIL STD 2549 Review and Comment Effort
- ... and others that are dependant upon approval of AIB procedures - most notably, the development of a tactical plan for Product Data Management IT.



Automated Document Conversion System (ADCS) Program Status Report

Paul Behrens

AMCOM Army EDMO

March 30, 1999

ADCS Project Overview



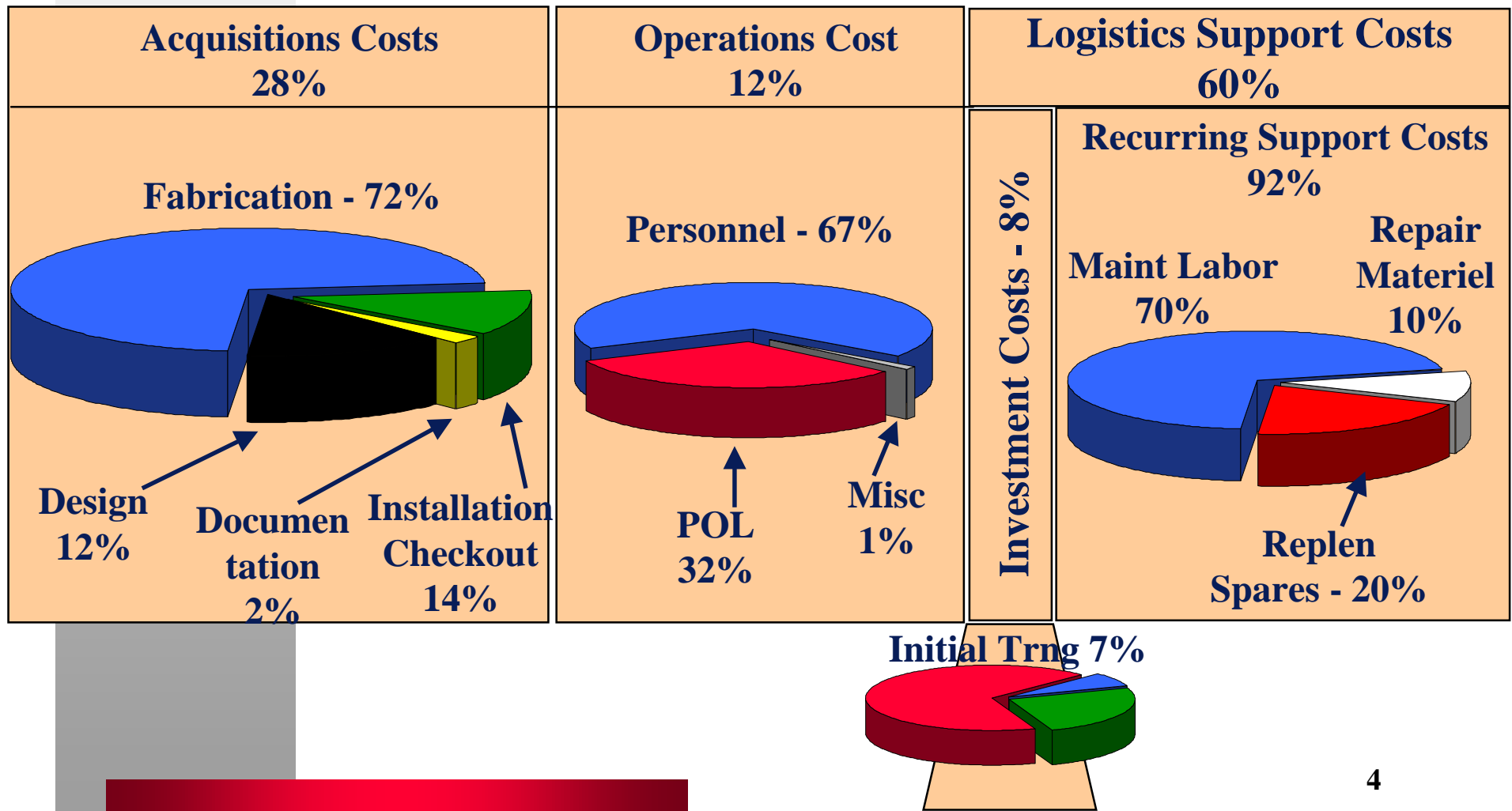
- **Army ADCS Project Background/DoD Goals**
- **FY 98 Project Strategy**
- **FY 98 Project Accomplishments**
- **Remaining FY98 Challenges**
 - **M113 Conversion**
 - **M113 Process Analysis**
 - **HMMWV Project Initiation**
- **FY 99 Project Focus**
- **FY 99 Project Submissions/Approvals**
- **Summary**

Project Background/Goals

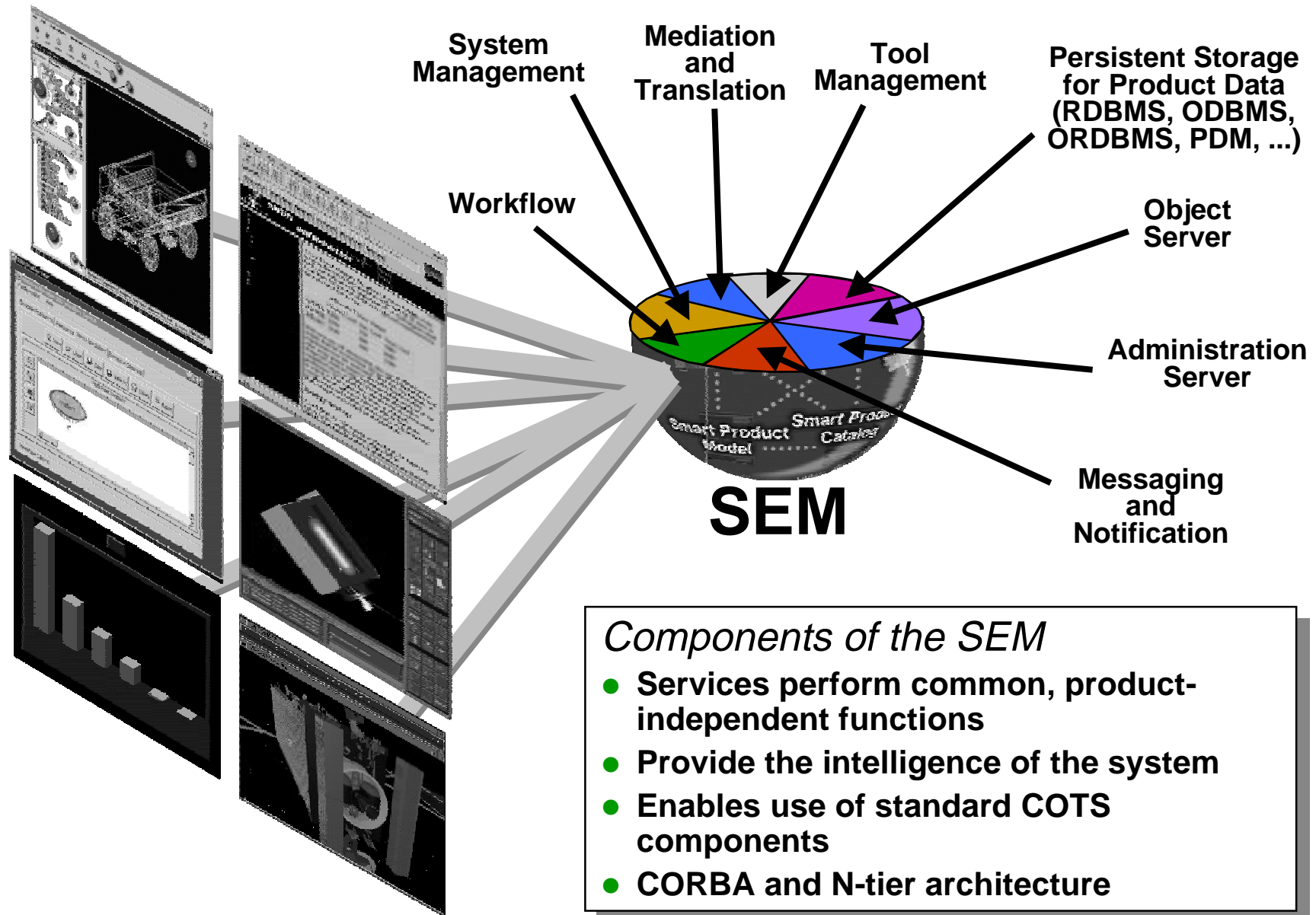


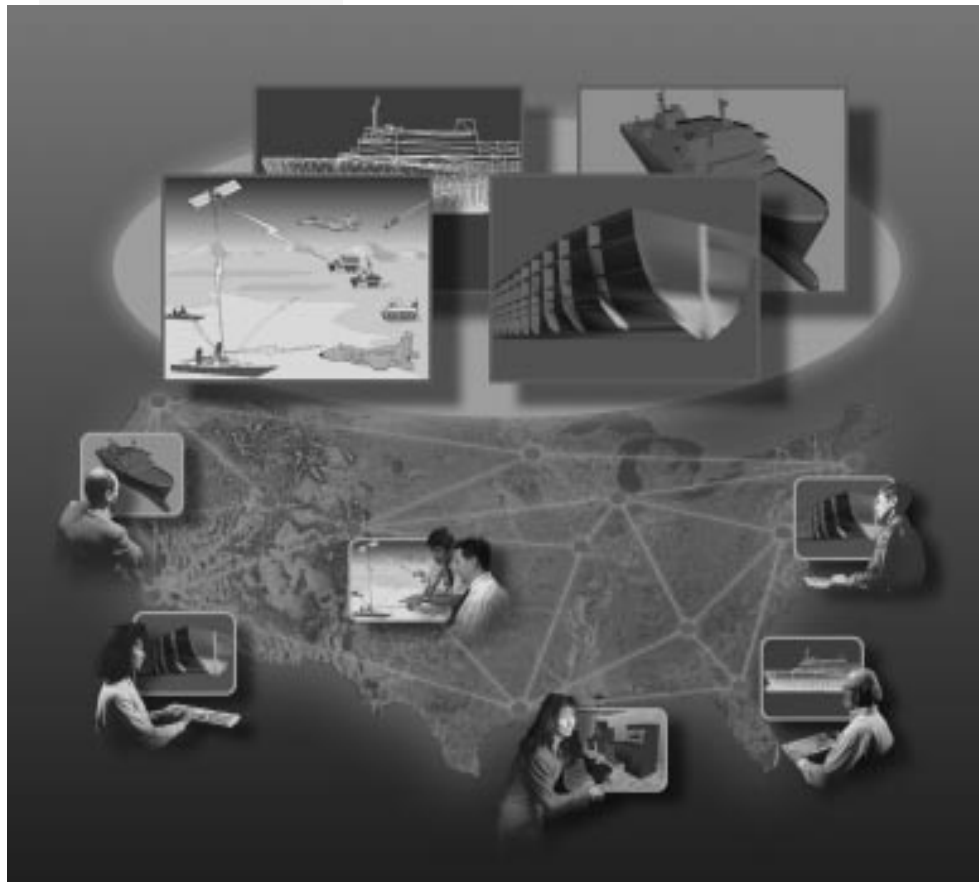
- **DUSD(L) stated that “DoD is committed to rapidly institutionalizing a fully digitized business operating environment...” Further, DUSD(L) requested that the Services “size its complete organic conversion capability requirement and takes action now to acquire that capability”**
- **The Army’s Goal is to fully satisfy this direction and has made significant progress in doing so. Specifically, the Army plans to:**
 - **establish a comprehensive conversion capability to support the logistics and engineering community, and;**
 - **provide conversion operations to convert legacy data to formats usable in today’s and future business processes by 2002**

Life Cycle Cost Distribution



Component Software Technology





Flexibility, Scalability and Availability

An Open Distributed, Collaborative Environment for Providing :

- **System Performance, Cost, Schedule**
- **Integrated Solutions to Mission Needs**
- **Continuous Visibility Into System Options**
- **Total Value Assessment**
- **Timely Technology Insertion**

FY 98 ADCS Program Strategy



- Development Of Specifications For Bulk Conversion
- Select One Or More Weapons Platform(s) To Convert Its Active Drawing Inventory To An Intelligent Format
- Establish and Validate Process Metrics By Basing Procurement and Logistics Processes
- To Define A Business Case Substantiating The Merits Of Converting Drawings To An Intelligent Format
- ✓ *M113 and HMMWV Programs Selected For Bulk Conversion To Aid In Satisfying The Above Goals*

FY 98 Accomplishments



- **Level 6 CAD Perfect Conversion Of Engineering Data**
 - Developed an M113 Program Specific Conversion Specification;
 - Deliveries Underway With IPRs Held Every 6 to 8 Weeks
- **Initiated HMMWV Data Conversion**
- **Initiated H60 Program Level 4 Data Conversion - Establishes First Digital/ Multimedia Program Library Concept**
- **Initiated Data Conversion Effort To Capture Panama Canal Infrastructure**
- **Developed Draft ADCS Performance Specification and Conversion Handbook**
- **Initiated Business Case Development Activities**

FY 99 Project Focus



- **The Army Will Build on FY98 Project Initiatives and Pave the Way for Successfully Executing the Army's Unfunded POM Line Established for FY00 Through 05**
- **The FY99 Overall Project Focus Is Fourfold:**
 - **Perform Bulk Conversion on High Priority Army Programs;**
 - **Introduce Processes For Managing and Using ADCS Converted Data;**
 - **Establish an Infrastructure to Accommodate Management of Converted Data Throughout the Army Using The Dod Repository System; and**
 - **Establish a Means for Controlling the Evolution of ADCS Converted Engineering Data Through Management of Conversion Specifications**

FY99 Project Status



- **ADCS Project Transferred To Services For FY99 Execution**
- **Army Selected As Executive Service Since It Was The Only Service With Programmed Funding Line**
- **Services Were Requested To Support A Short Fuse Data Call For FY99 ADCS Funding**
- **80 ADCS Projects Submitted By Services As Candidates For FY99 Funding (18 Army Projects Were Submitted)**
 - **Each Service Directed To Identify Its Top Ten Projects**
 - **OSD Selected 4 Projects from Each Service For Initial Funding**
 - **Anticipate Funding Within Two Weeks**

FY 99 Project Status



- **Held Industry FY99 Requirements Review 5 March**
- **Current Process For Competitive Award Of Requirements Validated For FY99 Efforts**
- **POM 00-05 Funding Is Still Unapproved**

FY99 Project Kick-Off



- **The Army's Strategy for Accomplishments of the FY 99 ADCS Incorporates Both Contractor Effort and In-house Efforts**
- **Conversion Infrastructure Support Component Will Be Accomplished Usings an Existing 8(a) Set-aside Contract, NAVSEA CADII Contract and the Naval Surface Warfare Center at Carderock Maryland**
- **The Primary Conversion Contract Will Be the 12 Year NAVSEA CADII Contract**
 - **Competitively Awarded To Intergraph in 1991**
 - **Ceiling Of 362.4 Million Dollars**
- **Validation Activity Will Be by In-house Army Personnel**
- **Baseline Release Will Be Under Existing STS Contracts**

Projects/Requirements Funded:



● Project Sustainment

- Development of a Program Manager's Implementation Guide
- Development and Implementation of a Conversion Toolset Designed to Ensure the Maintenance of the Converted Data
- Development of World Wide Web accessible repository of software tools and viewers
- Provide a center of technical expertise for the Navy ADCS Management Office, in conjunction with the Army's, to assist ADCS programs (and conversion contractors) in proper use of standard formats and assure that the selected formats and data structures will support program objectives

● Bulk Conversion Projects - M113 Follow-on

- Convert the Remainder of the Stock Numbered Drawings and the Computervision CADD5 Files to a Neutral CAD Format

Projects/Requirements Funded:



- **Bulk Conversion Projects - HMMWV Follow-on**
 - Convert/validate 3 to 5 Thousand Drawing Sheets
 - Validate Metrics for Time and Cost of Conversion Process
 - Document Benefits of Conversion Activity
 - Establish Business Rules for Application of Neutral CAD Data Into Business Processes
 - Implement Lessons Learned From the Introduction of Neutral CAD Data
- **Bulk Conversion Project - H60 Mylar Conversion**
 - Convert First Increment of AMCOM Stable Base Engineering Data Converted to CAD Perfect 2D Vector Formats
 - Develop An Integration Plan With Supporting Coordination to Store the Resulting Files in JEDMICS
 - Update Procurement Operations And Training Guides



Unfunded FY99 Projects

- Remaining AMCOM Stable Base Conversion
- Product Information for Manufacturing Excellence (PRIME)
- M1A1/Grizzly Data Conversion
- Bradley Fighting Vehicle Conversion & Validation
- Neutral Data Definition Conversion
- ADCS in Support of Simulation Based Acquisition
- Army Mylar Conversion and Validation Center
- Panama Canal Data Capture
- DoD/Congress DKE
- Intelligence Data Conversion & JEDMICS Integration
- ARMY COE Transatlantic Program Office
- ARMY COE Latin American Program Office
- ARMY COE Federal Records Center
- ARMY COE Waterway Experiment PMO
- Foreign Military Sales PMO
- Facilities Engineering Command

Summary



- **Army Fully Supports ADCS Goals**
- **FY98 Projects Are On Track And Will Establish A Firm Foundation for Outyear Requirements**
- **Management Plans Are Geared To Build An ADCS Success Story**
- **Your Continued Support Is Appreciated**

ADCS Call Letter

- Purpose – to solicit FY2000 Projects and to request the completion of a survey that will help support the preparation of an Army business case for ADCS.
- To be signed by Ms. Price, ADCSRDA for Science and Technology.
- Will be sent to MSC Chief Engineer, DSAs, PEOs, and Corp of Engineers
- Will include:
 - ADCS Fact Sheet
 - ADCS Project Submittal Form, Pricing Model, and draft evaluation guidelines

“Best Guess” OF ADCS FUNDING PICTURE FOR FY2000

- FY98 Army Funding - ~ \$M
- FY99 Army Funding - ~ \$M
- Army FY00 POM - ~\$M (UFR)
- Congressional Markup of DOD Appropriations Bill - ~ \$M
- Most Likely amount DOD will receive - ~ \$M
- Most likely amount Army will receive - ~ \$M



ADCS
Draft FY 2000 ROADMAP
And
Draft Project Evaluation Criteria

ADCS Draft FY 2000 ROADMAP



FY 2000 Project Planning Kick-Off	30 March 1999
Submittal of PDM/FCG Comments on Project Submit Criteria.....	02 April 1999
Submittal of Data Call Letter to AMC for Coordination.....	05 April 1999
Ms. Price Approval/Sign out of Data Call Letter.....	09 April 1999
Develop/Submit Draft Project Evaluation Guide.....	17 May 1999
PDM/FGG Concurrence with Project Evaluation Guide	01 June 1999
AIB Approval OF Project Evaluation Guide.....	15 June 1999
Data Call Project Submittal Due Date.....	15 June 1999
Submittal of Packaged Projects to the PDM/FCG.....	01 July 1999
M/FCG Evaluation Comments Due.....	15 July 1999
PDM/FCG Project Prioritization.....	21 July 1999
Provide PDM/FCG Recommendations To The AIB.....	30 July 1999
AIB Formal Approval/Submission of Projects.....	31 August 1999
DCS/RDA Project Submittal To OSD	03 September 1999

ADCS Draft FY 2000 ROADMAP Cont.)



Services Meeting to Coordinate/Prioritize Projects.....Early October 1999
Services Prepare/ Submit Projects & Contracting Plan.....Early November 1999
OSD Approve Projects/Contracting Plan.....Mid November 1999
OSD Send Funding to Services.....Mid December 1999



ADCS

Draft Project Evaluation Criteria



Draft Project Evaluation Criteria

- **Executability**

- **How executable is the requirement based on the following**
 - **contracting strategy**
 - **conversion schedule**
 - **conversion validation plan**
 - **validation resources**



Draft Project Evaluation Criteria

- **Business Case/ROI/TOC/ALT-PLT Reduction**
 - **Does the planned use of ADCS conversion resources result in a decrease in weapon system ownership**
 - **Reductions in engineering change processing costs**
 - **Reductions in costs to create follow on technical data products developed or modified based on the use of engineering data**
 - **Reductions in engineering data storage costs**
 - **Reductions in reprourement costs (Administrative Lead Time)**
 - **Reductions in component or end item manufacturing costs (Procurement Lead Time)**
 - **Reductions in component or end item manufacturing costs (Procurement Lead Time or Product Unit Costs)**

Draft Project Evaluation Criteria



Business Case/ROI/TOC/ALT-PLT Reduction (Cont.)

- **Must quantify based on lower technical data development/modification in-house or prime contractor man-hours required, lower unit costs, or lower data storage costs (in terms of fewer square feet of storage space required or data management man-hours)**
- **Reduced costs should be projected over a five year term to determine ROI impacts**
 - **Although not required with the submission, backup data substantiating the reduced costs should be available**

Draft Project Evaluation Criteria



- **Follow-On Efforts With Solid Return On Investment**
 - Previously ADCS Funded programs with metrics (Based on criteria above) projecting a 5 year or less Return On Investment (ROI)
- **Out of Production /Service Life Extension System with 10 year remaining life**
 - Weapons Programs or Civil Engineering Projects that have an estimated remaining service life of ten years or greater
- **Data Support For Smart Enterprise Model SBA Concept**
 - Project includes requirement for conversion of raster 2D CAD to 3D CAD data using STEP or other neutral format
 - Project submission may be a pilot effort but must include plans for incorporation of resulting data into organizational business process

Draft Project Evaluation Criteria



- **Multi-Service Project**

- Project must meet the needs of more than one service, may be infrastructurally oriented or a joint use weapon with both services requiring the data in CAD format

- **Number of Procurement Actions/Sustainment Activity**

- Projected number of planned procurement actions on the data to be converted over a five year period of time
- Includes considerations for the amount of competition/ break-out experienced on the components to be converted
- Also to be considered is the current storage medium for the data (paper vs digital)
 - A preference may be given for projects converting paper to CAD on components with moderate to high reprourement actions over a five year period

Draft Project Evaluation Criteria



- **Number of Changes Expected (Major Mods, Retrofits, ECP History, ETC)**
 - Projected number of planned or projected component modification/change actions requiring updated to configuration and product data over a five year period of time
- **Army DA Authenticated Prioritization List**
 - The DA's list of weapon systems prioritized based on importance to the Army mission
- **MSC CDRs Priority**
 - Major systems command identification of project priority



ADCS Performance Specification

presented to

Product Data Management (PDM) Functional Coordinating Group

March 30, 1999

Product Data Integration Technologies, Inc.

Technical Services, East
4130 Faber Place Drive
Charleston, SC 29405
Phone: 843-747-1470
Fax: 843-747-2438
www.pdit.com



Agenda

Overview

ADCS Performance Specification Requirements

ADCS Handbook

ADCS Performance Specification Template

ADCS Performance Specification

ADCS Assistant

Questions and Answers



Purpose of ADCS Performance Specification

- ✦ To gather and analyze data needed to prepare (ADCS) conversion contractor guidelines which will be published as a Performance Specification.
- ✦ To specify data file formats to support business functions.
- ✦ To determine how we are to manage data and metadata needed to support functions.
- ✦ To ensure consistent conversion processes from multiple conversion vendors



ADCS Performance Specification Tasks

- * Conduct Survey of Data Uses
- * Determine Data Representation Formats for various business scenarios
- * Define the deliverable and exchange data formats
- * Analyze commercial software that supports various data formats
- * Evaluate MIL-STD 2549, MIL HDBK 61, MIL HDBK Data Management Guide
- * Prepare Deliverables
- * Utilize Industry Review Board



ADCS Performance Specification Task Update

Kick-Off meeting (Charleston)	_____	24-25 Sept 98
Submit Master Template	_____	9 Oct 98
Industry Survey conducted	_____	27 Oct 98
Industry Review Board (IRB) at CALS	_____	27 Oct 98
Submit Draft ADCS Performance Specs	_____	13 Nov 98
Revised Draft submitted	_____	23 Nov 98
Submit Draft Army Survey	_____	17 Nov 98
Task Status Presentations	_____	1 Dec 98
Task Status Presentations	_____	20 Jan 99



ADCS Performance Specification Task Update (cont.)

Document Drafts to HMMUV for Review	15 Mar 99
Army Survey on Web	31 Jan 99
Drafts returned with Reviews	2 April 99
Task Status Presentations	25 Feb 99
Final Drafts to HMMWV for Procurement	16 Apr 99
Final Drafts returned with comments	30 April 99
Task Status Presentations	04 May 99
Final ADCS Guidance Specification	21 May 99
Final ADCS Handbook	21 May 99



Project Overview

- * The Performance Specification template is a template which is filled in using the Handbook or Assistant for generating the Performance Specification.
- * The Performance Specification contains specific contractual information and is intended to be given to the contractor.
- * The twelve “Detailed Definition Packages” have been changed from Specification appendices to stand-alone documents. The corresponding package may be given to the contractor as a means for verification throughout the conversion project.
- * The Handbook is a true “How To” document, providing instruction ensuring accurate Performance Specification completion, through activities and numerous ADCS-specific forms.



Project Overview (cont.)

The ADCS Assistant

Provides interactive assistance throughout the conversion procurement process.

ADCS Assistant Highlights

Hyperlinking provides interoperability between the Assistant, the Handbook, the Guidance Specification, the Performance Specification and the vendor letter

Predetermined optional/required data

Allows for exit and re-entry

Automatic programming of document packet quantity

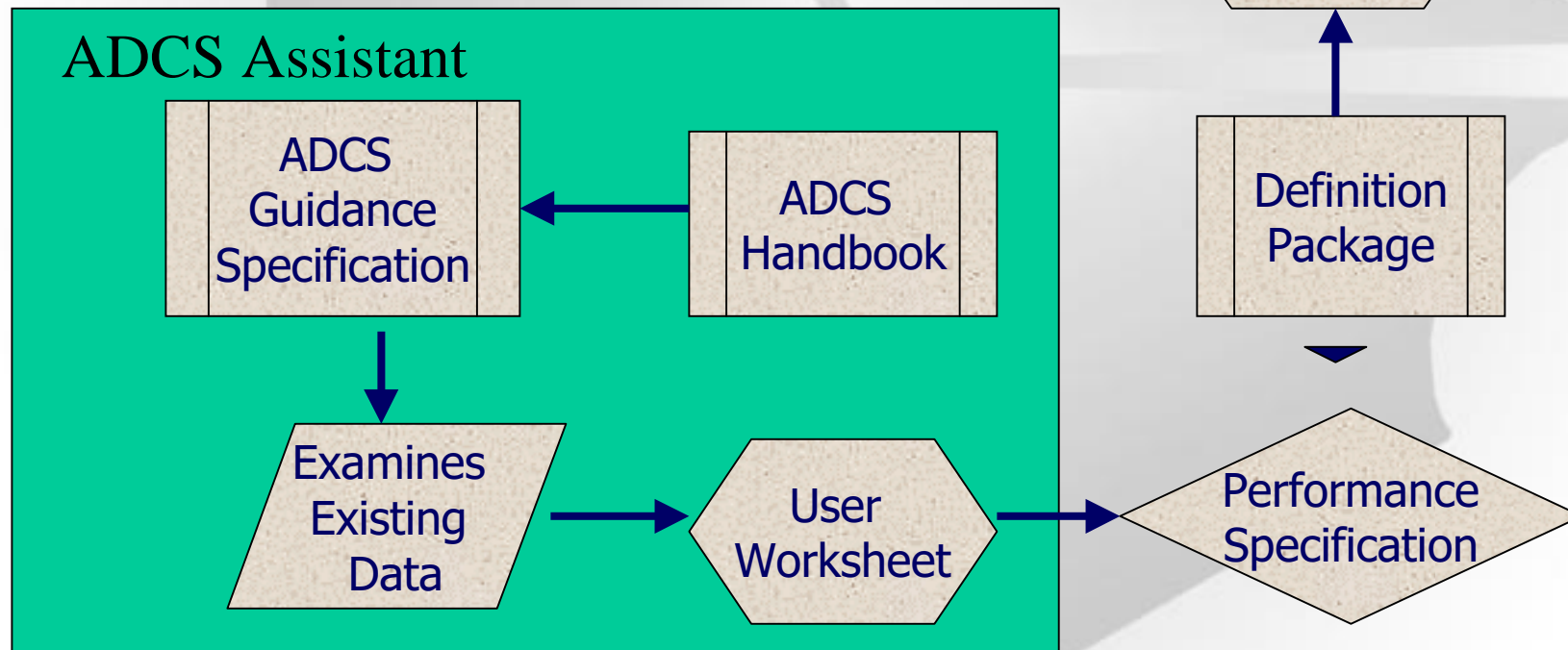
Determines one of twelve possible conversion types

Upon completion, allows for printing of project-specific Performance Specification and accompanying Vendor Letter



Concurrent Use of ADCS Specification and ADCS Handbook

Steps to Procurement





ADCS Detailed Definition Packages

- * 50+ Requirements Defined for Each Definition Package
- * Two conversion types identified CAD Capable and CAD Perfect
- * Four Major Functional Areas defined Mechanical, Electrical, AEC, and Mapping
- * Used present requirements to provide consistency
- * Definition Packages provide defined Validation Requirements for each functional requirement.
- * Defines MetaData for CDEX, ADCS, and PDM



ADCS Handbook

The ADCS Handbook supports the Performance Specification with definition of required data formats, metadata requirements, and standard business practices

The ADCS Handbook will provide cost benefits for the selection of various formats to achieve the different intended uses of the technical data.

The ADCS Handbook employs non-technical methods to assure ease-of-use by Army personnel.



ADCS Handbook

Contents:

- Procurement Process Definition
- Cost/Benefit Analysis of Format Selection based upon sound business practices
- ADCS-Specific User Worksheets: ADCS User Worksheet, ADCS Output Format Determination Worksheet
- ADCS-Specific User Forms: Validation Sign-Off Form, First Article Validation Form, Shipping Form, Deliverables Schedule
- Verification Tables, including verification methods based upon specific requirements



Procurement Process

- ✦ Program Manager assesses the information requirement of the Performance Specification Template.
- ✦ Performance Specification template requirements are fulfilled through instruction from ADCS Handbook or ADCS Assistant.
- ✦ ADCS Handbook includes a User Worksheet, allowing the recording of all accumulated information in one place.
- ✦ The User Worksheet information or ADCS Assistant information is transposed into the Performance Specification Template.



Procurement Process (cont.)

- ✦ The completed Performance Specification Template is the Performance Specification for that particular project.
- ✦ The Performance Specification, along with the corresponding Detailed Definition Package, is delivered to the contractor through contractually required DID.
- ✦ The information provided in the Definition Package is the means for verification throughout the project.



ADCS Specification and Handbook Delivery Method (cont.)

CD-ROM Layout Sections:

- Performance Specification Generation
Handbook, Guidance Specification, Performance Specification ,
Associated Applications (ex.: metadata files),Frequently Asked
Questions, On-Line Help
- Detailed Definition Packages
Containing 12 Requirement Packages
- Associated Links
Associated References location
- Tools and Capabilities
Metadata tools
- In addition, the CD Rom will also have:
 - Automatic Installation File
 - Readme File



ADCS Performance Specification Conclusion

The ADCS Guidance Specification will continue to be revised incorporating comments/suggestions from the HMMWV trial.

ADCS Assistant will developed to improve the ease of use of the Handbook and both will be revised from the HMMWV trial.

ADCS User Survey has been updated to ensure accurate and complete information is collected. It will posted on the Web for access.

SUMMARY

- Comments and suggestions on Project Evaluation Criteria needed by 2 April 99
- Need the name of the lead MSC representative (TACOM and SBCCOM) by 2 April 99. Names I have now are:

TACOM	Patricia Martinez, Geza Pap, Alberto Craff
AMCOM	John Pepper
ARL	Norm Lekang
CECOM	Richard Uldrich
IOC	Howard Killian
SBCCOM	Mike Cantrell, Tony Yablonicky
STRICOM	Charlie Goodwin
TECOM	Phyllis Kitchens

- Next VENUS conference is scheduled for 4 May 99 0800 – 0930 EDT. Main topic will be the Project Evaluation Guide